3Com®

Getting Started with the OfficeConnect® NETBuilder® 10 Bridge/Router

CONTENTS

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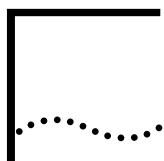
CONFIGURING YOUR OFFICECONNECT NETBUILDER 10 BRIDGE/ROUTER

This guide contains the information you need to install and configure your OfficeConnect® NETBuilder® 10 bridge/router.

The basic configuration that you will establish is shown in Figure 1. This configuration supports a leased-line connection between two OfficeConnect bridge/routers. It also supplies an ISDN dial-on-demand backup line.

As you are configuring your router, you will be asked to make choices based on what is required on your network.

Figure 1   Basic Configuration

Network management system

Office A
IPX = AAA

IP 10.1.0.0

OfficeConnect bridge/router

Leased line
IPX = CCC
IP = unnumbered

ISDN

ISP Internet

ISDN

OfficeConnect bridge/router

IP 20.1.0.0

Office B
IPX = BBB

Network management system
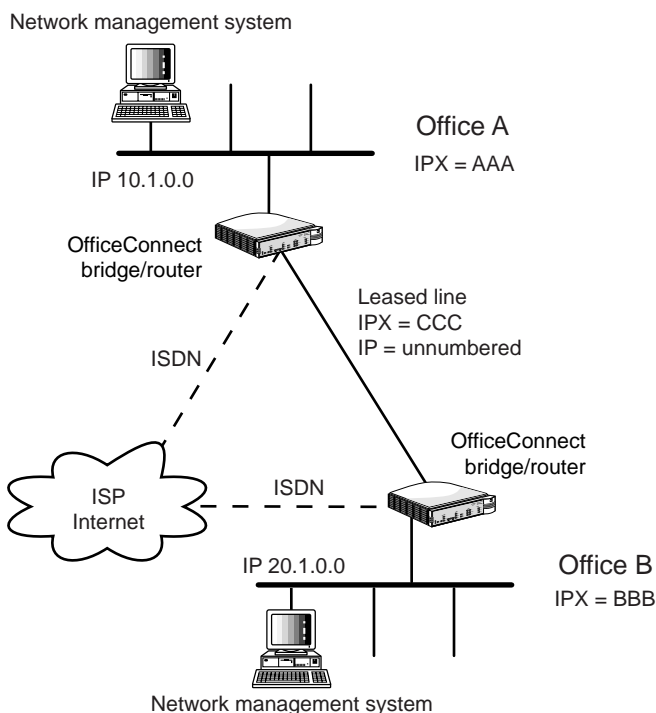
The instructions in this guide describe how to configure Office A. After you've completed the configuration for Office A, the same configuration steps need to be performed at Office B.

This guide has the following sections:

- Prerequisites
- Preconfiguration Set Up (which includes installing the OfficeConnect hardware)
- Configuration Procedure

Prerequisites

Before you begin installing and configuring your OfficeConnect bridge/router, you must satisfy the following prerequisites:

- You must have a PC on your network that will function as your network management station (NMS).
- This NMS must have browser software that is compatible with Web Link: either Netscape Navigator 4.08 or later, or Microsoft Internet Explorer 4.01 or later.

> **i** *Web Link is the web-based network management application that comes with your OfficeConnect NETBuilder bridge/router.*

- You need to obtain IP addresses and subnet masks for your network.
- You will also need to order a leased line and an ISDN line from your telco provider or providers.

> **i** *When your ISDN line is installed you will receive information regarding the ISDN dial numbers, ISDN switch type, and SPID numbers. Retain this information for use during configuration.*

Preconfiguration Set Up

This section describes the things you need to do before performing the actual network configuration.

Set Up the NMS as a DHCP Client

Refer to the documentation that came with your PC operating system for information on how to perform this set up.

Install the OfficeConnect on a Tabletop

Attach the plastic feet supplied with your OfficeConnect bridge/router; see Figure 2.

⚠ *CAUTION: Do not restrict air flow around the sides and back of the bridge/router.*

Figure 2　Attaching Plastic Feet to OfficeConnect Bridge/Router

Remove feet from their adhesive backing.
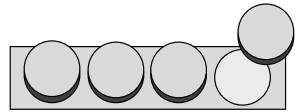
Attach feet to the bottom of the chassis, using the semi-circle marks for placement.
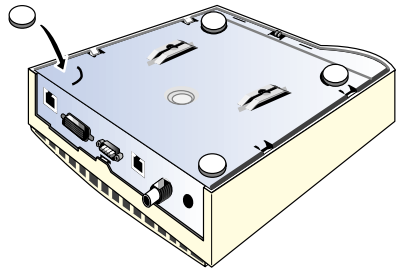
Cable the Bridge/Router

Figure 3 shows the back panel connectors on the OfficeConnect bridge/routers. Refer to this figure when you attach or plug in cables.

Figure 3 OfficeConnect Back Panel Connectors
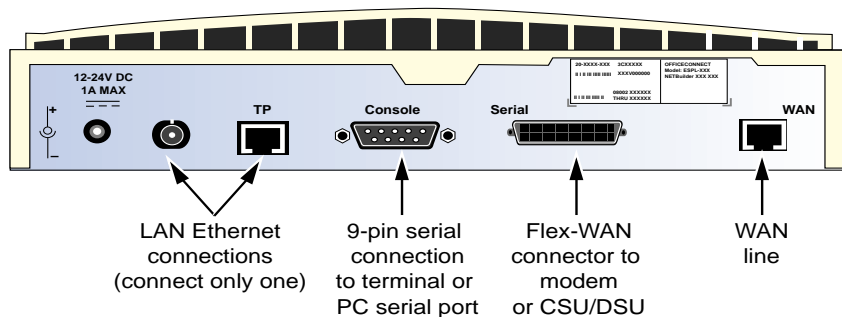
Cable the Ethernet Connector

The OfficeConnect bridge/router accepts either a 10BASE-2 coaxial or 10BASE-T twisted pair (TP) Ethernet cable connection.

Attach a coaxial Ethernet cable to the BNC connector using a T-connector, or plug the 8-foot twisted pair cable supplied with the OfficeConnect bridge/router into the slot labeled TP.

i> *Only one Ethernet connection is allowed.*

Cable the Serial Port

Attach the special 3Com Flex-WAN cable to the port labeled Serial.

Attach the Flex-WAN end of the cable to the OfficeConnect bridge/router port. The other end of the cable has the appropriate connector (V.35, X.21, or RS-232) for a serial modem or CSU/DSU device.

i> *You should have ordered the Flex-WAN cable when you ordered your OfficeConnect bridge/router. You can order a Flex-WAN cable from your local 3Com sales representative.*

Plug the CSU/DSU or modem cable into the connector on the Flex-WAN cable. Connect the CSU/DSU or modem to the leased line provided by your telco vendor.

No leased line configuration is required. The OfficeConnect NETBuilder 10 bridge/router automatically configures the PPP connection when power to the bridge/router is turned on.

Cable the ISDN Port

Plug the 8-foot RJ-45 cable supplied with the OfficeConnect bridge/router into the port labeled WAN.

ISDN connections to an OfficeConnect bridge/router used in the U.S. and Canada also require a network termination (NT1) device and power supply. These can be leased from the telephone company or purchased from an ISDN equipment vendor. In other countries, you do not need to provide this equipment because the function of the equipment is provided by the ISDN equipment at your site.

Turn on Power to the OfficeConnect

Attach the power cord to the power receptacle on the back panel. This receptacle is labeled with the electrical rating for the power adapter included with your OfficeConnect bridge/router.

The OfficeConnect bridge/router does not have a power switch.

To turn power on, plug the other end of the power cord into an electrical outlet.

⚠️ *CAUTION: Make certain you plug the OfficeConnect bridge/router into an easily accessible electrical outlet located near the unit.*

Wait for all the LEDs to turn green. When the LEDs are green you are ready to continue.

ⓘ *To turn off power or to reset the bridge/router, unplug the power cord from the outlet.*

Restart the NMS DHCP Client

When you restart the PC, the NMS DHCP client (your PC) acquires an IP address from the OfficeConnect bridge/router DHCP server, which is enabled by default.

This step is necessary to establish the connection between your NMS and the OfficeConnect bridge/router.

You are now ready to begin configuring your network.

Launch Web Link

Web Link is a built in web-based management tool that you can use to configure your OfficeConnect NETBuilder 10 bridge/router.

1 Point the browser at the default IP address, 10.1.0.1.

2 Log on using the user name Root with no password.

The Web Link home page opens in the browser window.

Figure 4 Web Link Home Page
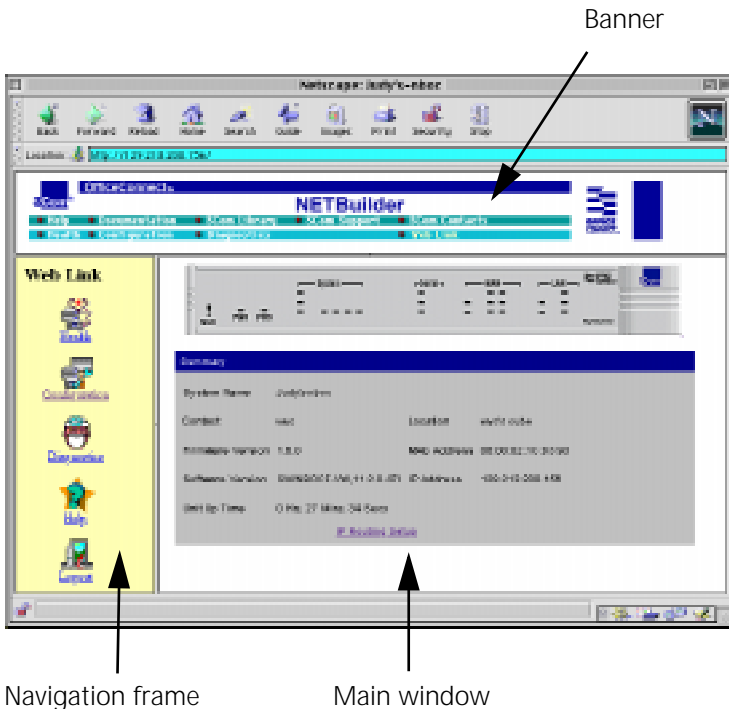
Figure 4 shows the Web Link home page. This page contains the NETBuilder banner (with buttons to

web-based information), a navigation frame, and a main window. The navigation frame lets you select from the Web Link basic functions. The contents of the navigation frame and the main window of the page change depending on what function you have selected.

> **i** *You can return to the Web Link home page at any time by clicking Web Link in the banner.*

3 Assign a default password to the root user.

a In the navigation frame, click the Configuration link.

b In the navigation frame, click the IP Routing link.

c In the navigation frame, click the System Parameters link.

d Enter your new password and confirm it in the fields provided.

e Click Apply.

> **i** *If you have the Web Link help window open on your display, you may need to use the vertical scroll bar to bring the Apply button into view.*

Configuration Procedure

This section provides step by step instructions for configuring the set up shown in Figure 5.

Figure 5   Office A Configuration
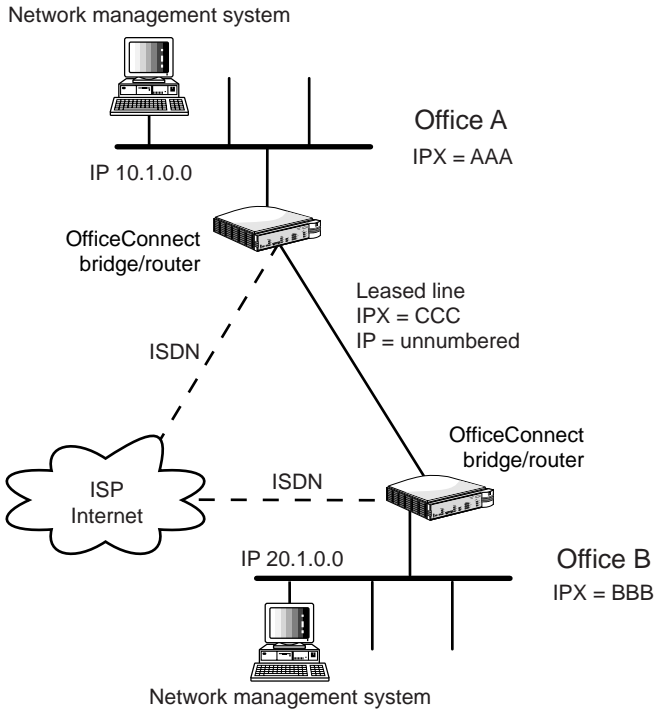
In these instructions, your site is Office A.

To configure your OfficeConnect NETBuilder 10 bridge/router, follow the steps in the following sections:

- Configuring ISDN Lines:
    - If you are located in North America, use the procedure in "Configuring ISDN (In North America)" on page 13.
    - If you are located outside North America, use the procedure in "Configuring ISDN (Outside North America)" on page 16.

- Configuring Dynamic Dial
- Configuring Network Addressing for Your Network:
  - If your network uses the IP protocol, use the procedure in "Configuring IP Network Addressing" on page 20.
  - If your network uses the IPX network protocol use the procedure in "Configuring IPX Network Addressing" on page 23.
- Configuring PPP Authentication

  Additional configuration steps that need to be performed at Office B are included in "Configuring PPP Authentication" on page 24. To complete your set up, you will need to exchange certain information with your Office B partners.

Configuring ISDN Lines

If you are in North America, you can use the SPIDWizard to automatically detect your ISDN switch type and SPID values.

Configuring ISDN (In North America)

To configure your Office A in North America, follow these steps:

1 Configure ISDN Dial on Demand.

In this procedure you will set the primary and secondary phone numbers as provided by your telecommunications carrier for the ISDN paths.

  a In the navigation frame, click the Configuration link.

  b In the navigation frame, click the IP Routing link.

  c In the Dial on Demand ISDN Setup section of the navigation frame, click the PATH LocalDialNo link.

  d In the start field, click the arrow and choose 2.1.

  e In the LocalDialNo field, enter the local dial number string in quotes. For example, enter:
    "4085551001"

  f Click Apply.

g In the start field, click the arrow and choose 2.2.

h In the LocalDialNo field, enter the second local dial number string in quotes. For example, enter:
"4085551002"

i Click Apply.

2 Use the SPID Wizard to detect the switch type and SPID values.

a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH SpidWIZard link.

b In the start field, click the arrow and choose 2.

c In the SPIDWIZard field, click the arrow and choose Trigger.

d Click Apply.

3 Enable the ISDN paths.

a In the Dial On Demand ISDN Setup section of the navigation frame, click PATH CONTrol.

b In the start field, click the arrow and choose 2.1.

c In the end field, click the arrow and choose 2.2.

d In the CONTrol field, click the arrow and choose Enabled.

e Click Apply.

Wait for SPID Wizard to complete SPID identification. SPID detection can take up to three minutes.

As the SPID Wizard is running, execution messages are displayed that show the detected SPID values and switch type.

If the execution messages show that SPID identification and switch type detection was successful, go to step step 7.

If the execution messages show that auto detection of SPID values has failed, you must enter them manually. Go to step 4.

4 To manually enter SPID values, follow these steps:

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH SPIDdn1 link.

   b In the start field, click the arrow and choose 2.

   c In the SPIDdn1 field, enter the first SPID value in quotes . Refer to the work order provided by your Telco vendor to determine the SPID values. For example, enter:
   ```
   "spidstring1"
   ```

   d Click Apply.

   e In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH SPIDdn2 link.

   f In the start field, click the arrow and choose 2.

   g In the SPIDdn2 field, enter the second SPID value in quotes. For example enter:
   ```
   "spidstring2"
   ```

   h Click Apply.

5 Enter the switch type.

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH SwitchType link.

   b In the start field, click the arrow and choose 2.

   c In the SwitchType field, click the arrow and choose your switch type. Refer to the work order provided by your Telco vendor to determine your switch type. For example, choose NTT.

6 Enable the ISDN paths.

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH CONTrol link.

   b In the start field, click the arrow and choose 2.1.

   c In the end field, click the arrow and choose 2.2.

   d In the CONTrol field, click the arrow and choose Enabled.

   e Click Apply.

    Your ISDN line is now initialized.

7 Logically assign the two ISDN paths to port 4.

  a In the Dial On Demand ISDN Setup section of the navigation frame, click the PORT PAths link.

  b In the start field, click the arrow and choose 4.

  c In the PAths field, enter 2.1, 2.2.

  d Click Apply.

8 Enable all paths on port 4.

  a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH CONTrol link.

  b In the start field, click the arrow and choose 2.1

  c In the end field, click the arrow and choose 3.

  d In the CONTrol field, click the arrow and choose Enabled.

  e Click Apply.

9 If your line speed requirements are different than the default (64 Kbps), you need to modify your path baud rate configuration.

  a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH BAud link.

  b In the start field, click the arrow and choose 3.

  c In the BAud field, enter your path baud rate. For example, enter:
      128

  d Click Apply.

Configuring ISDN (Outside North America)

To configure Office A outside North America, follow these steps:

1 Configure ISDN Dial on Demand.

Within IP Routing Configuration, set the primary and secondary phone numbers as provided by your telecommunications carrier for the ISDN paths.

  a In the Dial on Demand ISDN Setup section of the navigation frame, click the PATH LocalDialNo link.

b In the start field, click the arrow and choose 2.1.

c In the LocalDialNo field, enter the local dial number string in quotes. For example, enter:
   "4085551001"

d Click Apply.

e In the start field, click the arrow and choose 2.2.

f In the LocalDialNo field, ener the second local dial number in quotes. For example, enter:
   "4085551002"

g Click Apply.

2 Configure the path switch type.

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH SwitchType link.

   i ▷ *ETSI is the default Switchtype configured. If you are provisioned by an ETSI ISDN Switch, then skip to step 3.*

   b In the start field, click the arrow and choose 2.

   c In the SwitchType field, click the arrow and choose your switch type.

   d Click Apply.

3 Enable the ISDN paths.

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH CONTrol link.

   b In the start field, click the arrow and choose 2.1.

   c In the CONTrol field, click the arrow and choose Enabled.

   d Click Apply.

   Your ISDN line is now initialized.

4 Logically assign the two ISDN paths to port 4.

   a In the Dial On Demand ISDN Setup section of the navigation frame, click the PORT PAths link.

   b In the start field, click the arrow and choose 4.

   c In the PAths field, enter 2.1, 2.2.

    d Click Apply.

5 Enable all paths on port 4.

    a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH CONTrol link.

    b In the start field, click the arrow and choose 2.1

    c In the end field, click the arrow and choose 3.

    d In the CONTrol field, click the arrow and choose Enabled.

    e Click Apply.

6 If your line speed requirements are different than the default (64 Kbps), you need to modify your path baud rate configuration.

    a In the Dial On Demand ISDN Setup section of the navigation frame, click the PATH BAud link.

    b In the start field, click the arrow and choose 3.

    c In the BAud field, enter your path baud rate. For example, enter:
       128

    d Click Apply.

Configuring Dynamic Dial

To configure Dynamic Dial, follow these steps:

1 Set the normal bandwidth of the port to the same baud rate as you set for the path in the preceding procedure.

    a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT NORMalBandwidth link.

    b In the start field, choose 4.

    c In the NORMalBandwidth field, enter your port baud rate. For example, enter:
       128

    d Click Apply.

2 Add the phone number of the other site (Office B) to the dial number list.

   a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT DialNoList link.

   b In the start field, choose 4.

   c In the DialNoList field, enter the phone number in quotes of the remote site in the DialNoList field. For example, enter:
   "4085551212" T=BRI B=64

   d Click Apply.

   If you wish to use both BRI channels on this port, you must specify a second phone number in the dial number list.

   e In the start field, choose 4.

   f In the DialNoList field, enter the second phone number in quotes of the remote site. For example, enter:
   "4085551212." T=BRI B=64

   i *The "." in the phone number entry above allows you to enter the same number in both places.*

   g Click Apply.

3 Set the port to dial on demand.

   a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT DialInitState link.

   b In the start field, choose 4.

   c In the DialInitState field, choose DialOnDemand.

   d Click Apply.

4 Enable multilink protocol control on the port.

   a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PPP MlpCONTrol link.

   b In the start field, choose 4.

   c In the MlpCONTrol field, choose Enabled.

   d Click Apply.

5 Enable dynamic dial on the port.

  a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT CONTrol link.

  b In the start field, choose 4.

  c In the CONTrol field, choose Enabled.

  d Click Apply.

Configuring Network Addressing for Your Network

To configure network addressing, use either " Configuring IP Network Addressing" or " Configuring IPX Network Addressing," depending on which protocol your network uses.

Configuring IP Network Addressing

i *Use this procedure when you use IP as your network protocol. If you use IPX as your network protocol, go to "Configuring IPX Network Addressing" on page 23.*

To configure IP network addressing, follow these steps:

1 Obtain an address range to be assigned as the address pool for the DHCP server from your network administrator.

2 Assign the new IP address pool to the DHCP server.

  a In the Basic IP section of the navigation frame, click the DHCP AddressPool link.

  b In the start field, choose 1.

  c In the AddressPool field, enter a DHCP address pool. For example, enter:
     ```
     20.1.0.2 – 20.1.0.254
     ```

  d Click Apply.

3 Enable the new DHCP address pool.

  a In the Basic IP section of the navigation frame, click the DHCP CONTrol link.

  a In the start field, choose 1.

  b In the CONTrol field, choose AddressPool.

c Click Apply.

4 Assign an IP address to your routing ports.

   a In the Basic IP section of the navigation frame, click the IP NETaddr link.

   b In the start field, choose 1.

   c In the NETaddr field, enter a network address. For example, enter:
   20.1.0.1

   d Click Apply.

5 Reboot the OfficeConnect NETBuilder bridge/router by unplugging the power cord from the bridge/router then plugging it back in. Wait for all the LEDs to turn green.

i *When all the LEDs are green, you will need to relogin to the OfficeConnect NETBuilder bridge/router. Remember to use the user name "root" and the new password you assigned for the root user.*

6 Reboot the network management station PC so that the DHCP client in the network management station acquires a new address from the OfficeConnect NETBuilder bridge/router DHCP server.

7 Point the browser on the client to the new port 1 IP address. For example, enter:
20.1.0.1

8 In the Basic IP section of the navigation frame, click the IP NETaddr link.

   a In the start field, choose 4.

   b In the NETaddr field, enter IPCPA.

   c Click Apply.

9 In the Dial On Demand Dynamic Dial section of the navigation frame, click the PORT CONTrol link.

   a In the start field, choose 4.

   b In the CONTrol field, choose Enabled.

   c Click Apply.

10 Add a default route to port 4 to tell the OfficeConnect
NETBuilder bridge/router which port to use to
communicate to the internet

   a In the Basic IP section of the navigation frame, click IP
Route.

   b In the ROUte field, enter the route:
```
0.0.0.0 !4 1
```

   c Click Apply.

11 In the Policy Management Network Address Translation
section on the navigation frame, click the NAT
IPCPAddressMap link.

   a In the start field, choose 4.

   b In the IPCPAddressMap field, enter Enable.

   c Click Apply.

12 In the Policy Management Network Address Translation
section on the navigation frame, click the NAT CONTrol
link.

   a In the start field, choose 4.

   b In the control field, choose Enable.

   c Click Apply.

13 In the Dial on Demand ISDN Setup section of the
navigation frame, click the PATH CONTrol link.

   a In the start field, choose 3.

   b In the CONTrol field, choose Enabled.

   c Click Apply.

14 Enable IP routing.

   a In the Basic IP section of the navigation frame, click the
IP CONTrol link.

   b In the CONTrol field, choose ROute.

   c Click Apply.

Configuring IPX Network Addressing

> **i** *Use this procedure when you use IPX as your network protocol. If you use IP as your network protocol, go to "Configuring IP Network Addressing" on page 20.*

To configure IPX network addressing, follow these steps:

1 Return to the Web Link home page, click Web Link in the banner.

2 In the Web Link navigation frame, click the Configuration link.

3 In the Step-by-Step Configuration section of the navigation frame, click the IPX Routing link.

4 Specify an IPX network number and header format.

   a In the Basic IPX section on the navigation frame, click the IPX NETnumber link.

   b In the start field, choose 1.

   c In the NETnumber field, enter the IPX network number for the Ethernet LAN. For example, enter:
     &AAA eth

   d Click Apply.

   e In the start field, choose 4.

   f In the NETnumber field, enter the IPX network number for the WAN interface. For example, enter
     &CCC ppp

   g Click Apply.

5 Enable IPX Routing.

   a In the Basic IPX section of the navigation frame, click the IPX CONTrol link.

   b In the start field, choose 1.

   c In the CONTrol field, choose ROute.

   d Click Apply.

   e In the start field, choose 4.

f In the CONTrol field, choose ROute.

g Click Apply.

Configuring PPP Authentication

To configure PPP authentication, you will need to communicate with your partner office (Office B) and exchange user names and passwords.

Offices A and B must be configured before remote connectivity can be established.

For remote access security at Office A, assign passwords and usernames to your OfficeConnect NETBuilder 10 bridge/router network.

Office A Configuration

For remote access security at Office A, assign passwords and usernames to your OfficeConnect NETBuilder 10 bridge/router network.

To configure PPP authentication for Office A, follow these steps:

1 Return to the Web Link home page by clicking Web Link in the banner.

2 In the navigation frame, click the Configuration link.

3 In the navigation frame, click the IP Routing link.

4 In the Dial on Demand Dynamic Dial section of the navigation frame, click the PPP AuthLocalUser link.

    a In the start field, choose 4.

    b In the AuthLocalUser field, enter the username and password for Office A (your office) in quotes. For example, enter:
```
"OfficeA" "passwordA"
```

    c Click Apply.

5 In the Dial on Demand Dynamic Dial section of the navigation frame, click the PPP AuthRemoteUser link.

    a In the start field, choose 4.

b In the AuthRemoteUser field, enter the username and password for office B (the office remote from you) in quotes. For example, enter:
   "OfficeB" "passwordB"

c Click Apply.

6 Enable port control to establish PPP connectivity using access security.

   a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT CONTrol link.

   b In the start field, choose 4.

   c In the CONTrol field, choose Enabled.

   d Click Apply.

Continue with the Office B configuration.

Office B Configuration

i *When you or someone else is setting up Office B, all the configuration steps in the guide need to be performed on the OfficeConnect NETBuilder bridge/router located in that office. Then at the Office B location, the user names and passwords must be entered to establish remote access security.*

For remote access security at Office B, assign passwords and usernames to your OfficeConnect network.

To configure PPP authentication for office B, follow these steps:

1 Return to the Web Link home page by clicking Web Link in the banner.

2 In the navigation frame, click the Configuration link.

3 In the navigation frame, click the IP Routing link.

4 In the Dial on Demand Dynamic Dial section of the navigation frame, click the PPP AuthLocalUser link.

   a In the start field, choose 4.

b In the AuthLocalUser field, enter the username and password for office B in quotes. For example, enter:
`"OfficeB" "passwordB"`

c Click Apply.

5 In the Dial on Demand Dynamic Dial section on the navigation frame, click the PPP AuthRemoteUser link.

a In the start field, choose 4.

b In the AuthRemoteUser field, enter the username and password for office A in quotes. For example, enter:
`"OfficeA" "passwordA"`

c Click Apply.

6 Enable port control to establish PPP connectivity using access security.

a In the Dial on Demand Dynamic Dial section of the navigation frame, click the PORT CONTrol link.

b In the start field, choose 4.

c In the CONTrol field, choose Enabled.

Your OfficeConnect NETBuilder bridge/router configuration is complete.

TECHNICAL SUPPORT

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Information contained in this appendix is correct at time of publication. For the most recent information, 3Com recommends that you access the 3Com Corporation World Wide Web site.

Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site
- 3Com Knowledgebase Web Services
- 3Com FTP site
- 3Com Bulletin Board Service (3Com BBS)
- 3Com Facts℠ Automated Fax Service

World Wide Web Site

To access the latest networking information on the 3Com Corporation World Wide Web site enter this URL into your Internet browser:

`http://www.3com.com/`

This service provides access to online support information such as technical documentation and software library, as well as support options that range from technical education to maintenance and professional services.

3Com Knowledgebase Web Services

This interactive tool contains technical product information compiled by 3Com expert technical engineers around the globe. Located on the World Wide Web at **http://knowledgebase.3com.com**, this service gives all 3Com customers and partners complementary, round-the-clock access to technical information on most 3Com products.

3Com FTP Site

Download drivers, patches, software, and MIBs across the Internet from the 3Com public FTP site. This service is available 24 hours a day, 7 days a week.

To connect to the 3Com FTP site, enter the following information into your FTP client:

- Hostname: **ftp.3com.com**
- Username: **anonymous**
- Password: **<your Internet e-mail address>**

You do not need a user name and password with Web browser software such as Netscape Navigator and Internet Explorer.

3Com Bulletin Board Service

The 3Com BBS contains patches, software, and drivers for 3Com products. This service is available through analog modem or digital modem (ISDN) 24 hours a day, 7 days a week.

Access by Analog Modem

To reach the service by modem, set your modem to 8 data bits, no parity, and 1 stop bit. Call the telephone number nearest you:

Country	Data Rate	Telephone Number
Australia	Up to 14,400 bps	61 2 9955 2073
Brazil	Up to 28,800 bps	55 11 5181 9666
France	Up to 14,400 bps	33 1 6986 6954
Germany	Up to 28,800 bps	4989 62732 188
Hong Kong	Up to 14,400 bps	852 2537 5601

Country	Data Rate	Telephone Number
Italy	Up to 14,400 bps	39 2 27300680
Japan	Up to 14,400 bps	81 3 5977 7977
Mexico	Up to 28,800 bps	52 5 520 7835
P.R. of China	Up to 14,400 bps	86 10 684 92351
Taiwan, R.O.C.	Up to 14,400 bps	886 2 377 5840
U.K.	Up to 28,800 bps	44 1442 438278
U.S.A.	Up to 53,333 bps	1 847 262 6000

Access by Digital Modem

ISDN users can dial in to the 3Com BBS using a digital modem for fast access up to 64 Kbps. To access the 3Com BBS using ISDN, call the following number:

1 847 262 6000

3Com Facts Automated Fax Service

The 3Com Facts automated fax service provides technical articles, diagrams, and troubleshooting instructions on 3Com products 24 hours a day, 7 days a week.

Call 3Com Facts using your Touch-Tone telephone:

1 408 727 7021

Support from Your Network Supplier

If you require additional assistance, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

■ Product model name, part number, and serial number

■ A list of system hardware and software, including revision levels

■ Diagnostic error messages

■ Details about recent configuration changes, if applicable

Here is a list of worldwide technical telephone support numbers:

Country	Telephone Number
Asia Pacific Rim	
Australia	1 800 678 515
Hong Kong	800 933 486
India	+61 2 9937 5085
Indonesia	001 800 61 009
Japan	0031 61 6439
Malaysia	1800 801 777
New Zealand	0800 446 398
Pakistan	+61 2 9937 5085
Philippines	1235 61 266 2602
P.R. of China	10800 61 00137 or 021 6350 1590
Singapore	800 6161 463
S. Korea	
From anywhere in S. Korea:	00798 611 2230
From Seoul:	(0)2 3455 6455
Taiwan, R.O.C.	0080 611 261
Thailand	001 800 611 2000
Europe	
From anywhere in Europe, call:	+31 (0)30 6029900 phone
	+31 (0)30 6029999 fax

Country	Telephone Number
Europe, South Africa, and Middle East	
From the following countries, you may use the toll-free numbers:	
Austria	0800 297468
Belgium	0800 71429
Denmark	800 17309
Finland	0800 113153
France	0800 917959
Germany	0800 1821502
Hungary	00800 12813
Ireland	1800 553117
Israel	1800 9453794
Italy	1678 79489
Netherlands	0800 0227788
Norway	800 11376
Poland	00800 3111206
Portugal	0800 831416
South Africa	0800 995014
Spain	900 983125
Sweden	020 795482
Switzerland	0800 55 3072
U.K.	0800 966197
Latin America	
Argentina	AT&T +800 666 5065
Brazil	0800 13 3266
Chile	1230 020 0645
Colombia	98012 2127
Mexico	01 800 CARE (01 800 2273)
Peru	AT&T +800 666 5065
Puerto Rico	800 666 5065
Venezuela	AT&T +800 666 5065
North America	1 800 NET 3Com (1 800 638 3266)
	Enterprise Customers: 1 800 876-3266

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain an authorization number. Products sent to 3Com without authorization numbers will be returned to the sender unopened, at the sender's expense.

To obtain an authorization number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	+65 543 6500	+65 543 6348
Europe, South Africa, and Middle East	+31 30 6029900	+31 30 6029999
Latin America	1 408 326 2927	1 408 326 3355

From the following countries, you may call the toll-free numbers; select option 2 and then option 2:

Austria	0800 297468
Belgium	0800 71429
Denmark	800 17309
Finland	0800 113153
France	0800 917959
Germany	0800 1821502
Hungary	00800 12813
Ireland	1800553117
Israel	1800 9453794
Italy	1678 79489
Netherlands	0800 0227788
Norway	800 11376
Poland	00800 3111206
Portugal	0800 831416
South Africa	0800 995014
Spain	900 983125
Sweden	020 795482
Switzerland	0800 55 3072
U.K.	0800 966197

Country	Telephone Number	Fax Number
U.S.A. and Canada	1 800 NET 3Com (1 800 638 3266)	1 408 326 7120 (not toll-free)
	Enterprise Customers: 1 800 876 3266	

3Com Corporation LIMITED WARRANTY

OfficeConnect NETBuilder Bridge/Router

HARDWARE

3Com warrants this hardware product to be free from defects in workmanship and materials, under normal use and service, for the following length of time from the date of purchase from 3Com or its authorized reseller:

3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, 3Com may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of 3Com. Replacement products may be new or reconditioned. 3Com warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

SOFTWARE

3Com warrants that each software program licensed from it will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from 3Com or its authorized reseller. 3Com warrants the media containing software against failure during the warranty period. No updates are provided. 3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable 3Com published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. 3Com makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third party products listed in the 3Com software product documentation or specifications as being compatible, 3Com will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product or from use of the software product not in accordance with 3Com's published specifications or user manual.

YEAR 2000 WARRANTY

In addition to the Hardware Warranty and Software Warranty stated above, 3Com warrants that each product sold or licensed to Customer on and after January 1, 1998 that is date sensitive will continue performing properly with regard to such date data on and after January 1, 2000, provided that all other products used by Customer in connection or combination with the 3Com product, including hardware, software, and firmware, accurately exchange date data with the 3Com product, with the exception of those products identified at 3Com's Web site, http://www.3com.com/products/yr2000.html, as not meeting this standard. If it appears that any product that is stated to meet this standard does not perform properly with regard to such date data on and after January 1, 2000, and Customer notifies 3Com before the later of April 1, 2000, or ninety (90) days after purchase of the product from 3Com or its authorized reseller, 3Com shall, at its option and expense, provide a software update which would effect the proper performance of such product, repair such product, deliver to Customer an equivalent product to replace such product, or if none of the foregoing is feasible, refund to Customer the purchase price paid for such product.

Any software update or replaced or repaired product will carry a Year 2000 Warranty for ninety (90) days after purchase or until April 1, 2000, whichever is later.

OBTAINING WARRANTY SERVICE

Customer must contact a 3Com Corporate Service Center or an Authorized 3Com Service Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from 3Com or its authorized reseller may be required. Products returned to 3Com's Corporate Service Center must be pre-authorized by 3Com with a Return Material Authorization (RMA) number marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. The repaired or replaced item will be shipped to Customer, at 3Com's expense, not later than thirty (30) days after 3Com receives the defective product.

Dead- or Defective-on-Arrival. In the event a product completely fails to function or exhibits a defect in materials or workmanship within the first forty-eight (48) hours of installation but no later than thirty (30) days after the date of purchase, and this is verified by 3Com, it will be considered dead- or defective-on-arrival (DOA) and a replacement shall be provided by advance replacement. The replacement product will normally be shipped not later than three (3) business days after 3Com's verification of the DOA product, but may be delayed due to export or import procedures. When an advance replacement is provided and Customer fails to return the original product to 3Com within fifteen (15) days after shipment of the replacement, 3Com will charge Customer for the replacement product, at list price.

3Com shall not be responsible for any software, firmware, information, or memory data of Customer contained in, stored on, or integrated with any products returned to 3Com for repair, whether under warranty or not.

WARRANTIES EXCLUSIVE

IF A 3COM PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, CUSTOMER'S SOLE REMEDY FOR BREACH OF THAT WARRANTY SHALL BE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM'S OPTION. TO THE FULL EXTENT ALLOWED BY LAW, THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, AND NON-INFRINGEMENT, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. 3COM NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF ITS PRODUCTS.

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Some countries, states, or provinces do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages for certain products supplied to consumers, or the limitation of liability for personal injury, so the above limitations and exclusions may be limited in their application to you. When the implied warranties are not allowed to be excluded in their entirety, they will be limited to the duration of the applicable written warranty. This warranty gives you specific legal rights which may vary depending on local law.

GOVERNING LAW

This Limited Warranty shall be governed by the laws of the State of California, U.S.A. excluding its conflicts of laws principles and excluding the United Nations Convention on Contracts for the International Sale of Goods.

3Com Corporation
5400 Bayfront Plaza
Santa Clara, CA 95054
(408) 326-5000

FCC CLASS A VERIFICATION STATEMENT

WARNING: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules, and the Canadian Department of Communications Equipment Standards entitled, "Digital Apparatus," ICES-003. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at the user's own expense.

Changes or modifications not expressly approved by 3Com could void the user's authority to operate this equipment.

FCC CLASS B STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1 This device may not cause harmful interference, and

2 This device must accept any interference received, including interference that may cause undesired operation.

WARNING: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules, and the Canadian Department of Communications Equipment Standards entitled, "Digital Apparatus," ICES-003.These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from the one which the receiver is connected to.

- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

The Interference Handbook

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 004-000-00345-4.

NOTE: In order to maintain compliance with the limits of a Class B digital device, 3Com requires that you use quality interface cables when connecting to this device. Changes or modifications not expressly approved by 3Com could void the user's authority to operate this equipment. Refer to the manual for specifications on cabling types.

FCC D<small>ECLARATION OF</small> C<small>ONFORMITY</small>

We declare under our sole responsibility that the

Model: **Description:**
10   OfficeConnect NETBuilder bridge/router

to which this declaration relates, is in conformity with the following standards or other normative documents:

- ANSI C63.4-1992 Methods of Measurement
- Federal Communications Commission 47 CFR Part 15, subpart B
  15.107 (a) Class B Conducted Limits
  15.109 (a) Class B Radiated Emissions Limits
- 15.107 (e) Class B Conducted Limits
  15.109 (g) Class B Radiated Emissions Limits

3Com Corporation, 5400 Bayfront Plaza, P.O. Box 58145, Santa Clara, CA 95052-8145

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